What is claimed is:

1. An isolated antibody that specifically binds to an N-terminal sequence of whole parathyroid hormone (PTH) and is capable of detecting said whole PTH at a physiological level in a mammalian sample, with a proviso that said isolated antibody avoids binding to a non-whole PTH fragment.

2. The isolated antibody of claim 1, which is a monoclonal or polyclonal antibody or antibody fragment.

3. The isolated antibody of claim 1, which specifically binds to an epitope comprised in $PTH_{1-6}$, $PTH_{1-8}$, $PTH_{1-9}$, $PTH_{1-12}$, $PTH_{1-15}$ or $PTH_{3-12}$.

4. The isolated antibody of claim 1, which specifically binds to the parathyroid hormone peptide human $PTH_{1-8}$, rat $PTH_{1-8}$, mouse $PTH_{1-8}$, bovine $PTH_{1-8}$, canine $PTH_{1-8}$, porcine $PTH_{1-8}$, horse $PTH_{1-8}$, human $PTH_{1-15}$, rat $PTH_{1-15}$, mouse $PTH_{1-15}$, bovine $PTH_{1-15}$, canine $PTH_{1-15}$, porcine $PTH_{1-15}$, or horse $PTH_{1-15}$, wherein at least four amino acids in said peptide sequence are part of a reactive portion with the antibody.

5. The isolated antibody of claim 1, which specifically binds to an epitope comprised in $PTH_{1-5}$, $PTH_{1-7}$, $PTH_{1-8}$, $PTH_{1-10}$, $PTH_{1-11}$, $PTH_{1-13}$, $PTH_{1-14}$, $PTH_{1-15}$, $PTH_{1-16}$, $PTH_{1-17}$, $PTH_{1-18}$, $PTH_{1-19}$, $PTH_{1-20}$, $PTH_{1-21}$, $PTH_{1-22}$, $PTH_{1-23}$, $PTH_{1-24}$, $PTH_{1-25}$, $PTH_{1-26}$, $hPTH_{1-27}$, $PTH_{1-28}$, $PTH_{1-29}$, $PTH_{1-30}$, $PTH_{1-31}$, $PTH_{1-32}$, $PTH_{1-33}$, $PTH_{1-34}$, $PTH_{1-35}$, $PTH_{1-36}$, $PTH_{1-37}$, $PTH_{2-5}$, $PTH_{2-6}$, $PTH_{2-7}$, $PTH_{2-8}$, $PTH_{2-9}$, $PTH_{2-10}$, $PTH_{2-11}$, $PTH_{2-12}$, $PTH_{2-13}$, $PTH_{2-14}$, $PTH_{2-15}$, $PTH_{2-16}$, $PTH_{2-17}$, $PTH_{2-18}$, $PTH_{2-19}$, $PTH_{2-20}$, $PTH_{2-21}$, $PTH_{2-22}$, $PTH_{2-23}$, $PTH_{2-24}$, $PTH_{2-25}$, $PTH_{2-26}$, $PTH_{2-27}$, $PTH_{2-28}$, $PTH_{2-29}$, $PTH_{2-30}$, $PTH_{2-31}$, $PTH_{2-32}$, $PTH_{2-33}$, $PTH_{2-34}$, $PTH_{2-35}$, $PTH_{2-36}$, $PTH_{2-37}$, $PTH_{3-6}$, $PTH_{3-7}$, $PTH_{3-8}$, $PTH_{3-9}$, $PTH_{3-10}$, $PTH_{3-11}$, $PTH_{3-13}$, $PTH_{3-14}$, $PTH_{3-15}$, $PTH_{3-16}$, $PTH_{3-17}$, $PTH_{3-18}$, $PTH_{3-19}$, $PTH_{3-20}$, $PTH_{3-21}$, $PTH_{3-22}$, $PTH_{3-23}$, $PTH_{3-24}$, $PTH_{3-25}$, $PTH_{3-26}$, $PTH_{3-27}$, $PTH_{3-28}$, $PTH_{3-29}$, $PTH_{3-30}$, $PTH_{3-31}$, $PTH_{3-32}$, $PTH_{3-33}$, $PTH_{3-34}$, $PTH_{3-35}$, $PTH_{3-36}$, $PTH_{3-37}$, $PTH_{4-7}$, $PTH_{4-8}$, $PTH_{4-9}$, $PTH_{4-10}$, $PTH_{4-11}$, $PTH_{4-12}$, $PTH_{4-13}$, $PTH_{4-14}$, $PTH_{4-15}$, $PTH_{4-16}$, $PTH_{4-17}$, $PTH_{4-18}$, $PTH_{4-19}$, $PTH_{4-20}$, $PTH_{4-21}$, $PTH_{4-22}$, $PTH_{4-23}$, $PTH_{4-24}$, $PTH_{4-25}$, $PTH_{4-26}$, $PTH_{4-27}$, $PTH_{4-28}$, $PTH_{4-29}$, $PTH_{4-30}$, $PTH_{4-31}$, $PTH_{4-32}$, $PTH_{4-33}$, $PTH_{4-34}$, $PTH_{4-35}$, $PTH_{4-36}$, $PTH_{4-37}$, $PTH_{5-8}$, $PTH_{5-9}$, $PTH_{5-10}$, $PTH_{5-11}$, $PTH_{5-12}$, $PTH_{5-13}$, $PTH_{5-14}$, $PTH_{5-15}$, $PTH_{5-16}$, $PTH_{5-17}$, $PTH_{5-18}$, $PTH_{5-19}$, $PTH_{5-20}$, $PTH_{5-21}$, $PTH_{5-22}$, $PTH_{5-23}$, $PTH_{5-24}$, $PTH_{5-25}$, $PTH_{5-26}$, $PTH_{5-27}$, $PTH_{5-28}$, $PTH_{5-29}$, $PTH_{5-30}$, $PTH_{5-31}$, $PTH_{5-32}$, $PTH_{5-33}$, $PTH_{5-34}$, $PTH_{5-35}$, $PTH_{5-36}$, or $PTH_{5-37}$.

6. The isolated antibody of claim 1, wherein the binding between the antibody and the N-terminal sequence of whole PTH is dependent on the presence of amino acid residues 2-5 of the hPTH.

7. The isolated antibody of claim 1, wherein the binding between the antibody and the N-terminal sequence of whole PTH is dependent on the presence of amino acid residues 3-6 of the hPTH.

8. The isolated antibody or antibody fragment of claim 1, wherein the non-whole PTH fragment is a peptide having an amino acid sequence from between $PTH_{3-84}$ and $PTH_{34-84}$.

9. The isolated antibody of claim 1, wherein the non-whole PTH fragment is a peptide having an amino acid sequence of human $PTH_{7-84}$.

10. A method for measuring a physiological level of whole parathyroid hormone in a mammalian sample, which method comprises:

a) obtaining a sample from a mammal to be tested;

b) contacting said sample with an isolated antibody that specifically binds to an N-terminal sequence of whole PTH and is capable of detecting said whole PTH at a physiological level in said mammalian sample, with a proviso that said isolated antibody avoids binding to a non-whole PTH fragment; and

c) assessing a complex formed between said whole parathyroid hormone, if present in said sample, and said antibody, to measure physiological level of said whole parathyroid hormone in said mammalian sample.

11. The method of claim 10, wherein the sample is selected from the group consisting of a serum, a plasma and a blood sample.

12. The method of claim 10, wherein the sample is a clinical sample.

13. The method of claim 10 which is used for clinical management of renal disease subjects, subjects afflicted with osteoporosis or diagnosing primary hyperparathyroidism.

14. The method of claim 10, wherein the mammal is a human.

15. The method of claim 14, wherein the sample is a human clinical sample.

16. The method of claim 10, wherein the antibody is a monoclonal or polyclonal antibody or antibody fragment.

17. The method of claim 10, wherein the antibody specifically binds to an epitope comprised in $PTH_{1-6}$, $PTH_{1-8}$, $PTH_{1-9}$, $PTH_{1-12}$, $PTH_{1-15}$, or $PTH_{3-12}$.

18. The method of claim 10, wherein the antibody specifically binds to the parathyroid hormone peptide human $PTH_{1-8}$, rat $PTH_{1-8}$, mouse $PTH_{1-8}$, bovine $PTH_{1-8}$, canine $PTH_{1-8}$, porcine $PTH_{1-8}$, horse $PTH_{1-8}$, human $PTH_{1-15}$, rat $PTH_{1-15}$, mouse $PTH_{1-15}$, bovine $PTH_{1-15}$, canine $PTH_{1-15}$, porcine $PTH_{1-15}$, or horse $PTH_{1-15}$, wherein at least four amino acids in said peptide sequence are part of a reactive portion with the antibody.

19. The method of claim 10, wherein the antibody specifically binds to an epitope comprised in $PTH_{1-5}$, $PTH_{1-7}$, $PTH_{1-8}$, $PTH_{1-10}$, $PTH_{1-11}$, $PTH_{1-13}$, $PTH_{1-14}$, $PTH_{1-15}$, $PTH_{1-16}$, $PTH_{1-17}$, $PTH_{1-18}$, $PTH_{1-19}$, $PTH_{1-20}$, $PTH_{1-21}$, $PTH_{1-22}$, $PTH_{1-23}$, $PTH_{1-24}$, $PTH_{1-25}$, $PTH_{1-26}$, $hPTH_{1-27}$, $PTH_{1-28}$, $PTH_{1-29}$, $PTH_{1-30}$, $PTH_{1-31}$, $PTH_{1-32}$, $PTH_{1-33}$, $PTH_{1-34}$, $PTH_{1-35}$, $PTH_{1-36}$, $PTH_{1-37}$, $PTH_{2-5}$, $PTH_{2-6}$, $PTH_{2-7}$, $PTH_{2-8}$, $PTH_{2-9}$, $PTH_{2-10}$, $PTH_{2-11}$, $PTH_{2-12}$, $PTH_{2-13}$, $PTH_{2-14}$, $PTH_{2-15}$, $PTH_{2-16}$, $PTH_{2-17}$, $PTH_{2-18}$, $PTH_{2-19}$, $PTH_{2-20}$, $PTH_{2-21}$, $PTH_{2-22}$, $PTH_{2-23}$, $PTH_{2-24}$, $PTH_{2-25}$, $PTH_{2-26}$, $PTH_{2-27}$, $PTH_{2-28}$, $PTH_{2-29}$, $PTH_{2-30}$, $PTH_{2-31}$, $PTH_{2-32}$, $PTH_{2-33}$, $PTH_{2-34}$, $PTH_{2-35}$, $PTH_{2-36}$, $PTH_{2-37}$, $PTH_{3-6}$, $PTH_{3-7}$, $PTH_{3-8}$, $PTH_{3-9}$, $PTH_{3-10}$, $PTH_{3-11}$, $PTH_{3-13}$, $PTH_{3-14}$, $PTH_{3-15}$, $PTH_{3-16}$, $PTH_{3-17}$, $PTH_{3-18}$, $PTH_{3-19}$, $PTH_{3-20}$, $PTH_{3-21}$, $PTH_{3-22}$, $PTH_{3-23}$, $PTH_{3-24}$, $PTH_{3-25}$, $PTH_{3-26}$, $PTH_{3-27}$, $PTH_{3-28}$, $PTH_{3-29}$, $PTH_{3-30}$, $PTH_{3-31}$, $PTH_{3-32}$, $PTH_{3-33}$, $PTH_{3-34}$, $PTH_{3-35}$, $PTH_{3-36}$, $PTH_{3-37}$, $PTH_{4-7}$, $PTH_{4-8}$, $PTH_{4-9}$, $PTH_{4-10}$, $PTH_{4-11}$, $PTH_{4-12}$, $PTH_{4-13}$, $PTH_{4-14}$, $PTH_{4-15}$, $PTH_{4-16}$, $PTH_{4-17}$, $PTH_{4-18}$, $PTH_{4-19}$, $PTH_{4-20}$, $PTH_{4-21}$, $PTH_{4-22}$, $PTH_{4-23}$, $PTH_{4-24}$, $PTH_{4-25}$, $PTH_{4-26}$, $PTH_{4-27}$, $PTH_{4-28}$, $PTH_{4-29}$, $PTH_{4-30}$, $PTH_{4-31}$, $PTH_{4-32}$, $PTH_{4-33}$, $PTH_{4-34}$, $PTH_{4-35}$, $PTH_{4-36}$, $PTH_{4-37}$, $PTH_{5-8}$, $PTH_{5-9}$, $PTH_{5-10}$, $PTH_{5-11}$, $PTH_{5-12}$, $PTH_{5-13}$, $PTH_{5-14}$, $PTH_{5-15}$, $PTH_{5-16}$, $PTH_{5-17}$, $PTH_{5-18}$, $PTH_{5-19}$, $PTH_{5-20}$, $PTH_{5-21}$, $PTH_{5-22}$, $PTH_{5-23}$, $PTH_{5-24}$, $PTH_{5-25}$, $PTH_{5-26}$, $PTH_{5-27}$, $PTH_{5-28}$, $PTH_{5-29}$, $PTH_{5-30}$, $PTH_{5-31}$, $PTH_{5-32}$, $PTH_{5-33}$, $PTH_{5-34}$, $PTH_{5-35}$, $PTH_{5-36}$, or $PTH_{5-37}$.

20. The method of claim 19, wherein the binding between the antibody and the N-terminal sequence of whole PTH is dependent on the presence of amino acid residues 2-5 of the hPTH.

21. The method of claim 19, wherein the binding between the antibody and the N-terminal sequence of whole PTH is dependent on the presence of amino acid residues 3-6 of the hPTH.

22. The method of claim 10, wherein the non-whole PTH fragment is a peptide having an amino acid sequence from between $PTH_{3-84}$ and $PTH_{34-84}$.

23. The method of claim 10, wherein the non-whole PTH fragment is a peptide having an amino acid sequence of human $PTH_{7-84}$.

24. The method of claim 10, wherein the complex is assessed by a sandwich or competitive assay format.

25. The method of claim 24, wherein the antibody that specifically binds to an N-terminal sequence of whole PTH is used as a first antibody and an antibody that is capable of binding to a portion of whole PTH other than the N-terminal sequence which binds to the first antibody is used as a second antibody in a sandwich assay format.

26. The method of claim 25, wherein either the first antibody or the second antibody is attached to a surface and functions as a capture antibody.

27. The method of claim 26, wherein the capture antibody is attached to the surface directly or indirectly.

28. The method of claim 26, wherein the capture antibody is attached to the surface via a biotin-avidin (or streptavidin) linking pair.

29. The method of claim 10, wherein the complex is assessed by a format selected from the group consisting of an enzyme-linked immunosorbent assay (ELISA), immunoblotting, immunoprecipitation, radioimmunoassay (RIA), immunostaining, latex agglutination, indirect hemagglutination assay (IHA), complement fixation, indirect immunofluorescent assay (IFA), nephelometry, flow cytometry assay, plasmon resonance assay, chemiluminescence assay, lateral flow immunoassay, u-capture assay, inhibition assay and avidity assay.

30. The method of claim 10, wherein the complex is assessed in a homogeneous or a heterogeneous assay format.

31. The method of claim 10, wherein the physiological level of whole parathyroid hormone is less than 4 pmol/L.

32. The method of claim 10, wherein the physiological level of whole parathyroid hormone is from about 0.2 pmol/L to about 4 pmol/L.

33. The method of claim 10, which further comprises measuring a PTH peptide fragment level and/or total PTH level.

34. The method of claim 33, wherein said sample is contacted with one or more isolated antibodies, and wherein each of said one or more isolated antibodies specifically bind one or more PTH peptide fragments selected from the group consisting of: $PTH_{39-84}$, $PTH_{1-34}$, $PTH_{43-68}$, $PTH_{7-84}$, $PTH_{39-68}$, $PTH_{53-84}$, $PTH_{65-84}$, $PTH_{44-68}$, $PTH_{19-84}$, $PTH_{23-84}$, $PTH_{1-38}$, $PTH_{1-48}$, $PTH_{1-58}$, $PTH_{1-68}$, and $PTH_{1-78}$.

35. The method of claim 33, which further comprises comparing at least two parameters selected from the group consisting of the whole PTH level, total PTH peptide fragment level, total PTH level, C-terminal PTH fragment (cPTH) level, N-terminal PTH fragment level, and mid-terminal PTH fragment (mPTH) level.

36. The method of claim 35, wherein the results of said comparison are used to determine whether the mammal suffers from a bone turnover related disorder, or to monitor bone disease or disorder related treatment.

37. The method of claim 36, which is used in the diagnosis or monitoring of treatment for adynamic bone disease (ADN) or severe hyperparathyroidism.

38. The method of claim 35, wherein the comparison is in the form of a ratio or proportion between the whole PTH level and the total PTH level.

39. The method of claim 35, wherein the comparison is in the form of a ratio or proportion between the whole PTH level versus the combined total of the total PTH level minus the whole PTH level.

40. The method of claim 35, wherein the comparison is in the form of a ratio or proportion between the wPTH level versus the combined cPTH and mPTH fragment levels.

41. The method of claim 40, wherein the comparison is a ratio having a value less than about 0.020, and wherein the mammal is determined to be afflicted with adynamic bone disease.

42. The method of claim 40, wherein the comparison is a ratio having a value greater than about 0.020, and wherein the mammal is determined to be afflicted with severe hyperparathyroidism.

43. The method of claim 35, wherein the comparison is in the form of a ratio or proportion represented by the equation: wPTH / ((cPTH-wPTH)+(mPTH-wPTH)).

44. The method of claim 43, wherein the comparison is a ratio having a value less than about 0.0185, and wherein the mammal is determined to be afflicted with adynamic bone disease.

45. The method of claim 43, wherein the comparison is a ratio having a value greater than about 0.0185, and wherein the mammal is determined to be afflicted with severe hyperparathyroidism.

46. The method of claim 35, wherein the comparison is in the form of a ratio or proportion between the whole PTH level versus the total of the combined cPTH and mPTH fragment levels subtracted by the whole PTH level.

47. The method of claim 46, wherein the comparison is a ratio having a value less than about 0.020, and wherein the mammal is determined to be afflicted with adynamic bone disease.

48. The method of claim 46, wherein the comparison is a ratio having a value greater than about 0.020, and wherein the mammal is determined to be afflicted with severe hyperparathyroidism.

49. The method of claim 35, wherein the comparison is in the form of a ratio or proportion between the whole PTH level versus the combined whole PTH level, cPTH and mPTH fragment levels.

50. The method of claim 49, wherein the comparison is a ratio having a value less than about 0.0175, and wherein the mammal is determined to be afflicted with adynamic bone disease.

51. The method of claim 49, wherein the comparison is a ratio having a value greater than about 0.0175, and wherein the mammal is determined to be afflicted with severe hyperparathyroidism.

52. The method of claim 35, wherein the comparison is in the form of a ratio or proportion between the whole PTH level versus the cPTH fragment level.

53. The method of claim 52, wherein the comparison is a ratio having a value less than about 0.103, and wherein the mammal is determined to be afflicted with adynamic bone disease.

54. The method of claim 52, wherein the comparison is a ratio having a value greater than about 0.103, and wherein the mammal is determined to be afflicted with severe hyperparathyroidism.

55. The method of claim 35, wherein the comparison is in the form of a ratio or proportion between the whole PTH level versus the mPTH fragment level.

56. The method of claim 55, wherein the comparison is a ratio having a value less than about 0.0225, and wherein the mammal is determined to be afflicted with adynamic bone disease.

57. The method of claim 55, wherein the comparison is a ratio having a value greater than about 0.0225, and wherein the mammal is determined to be afflicted with severe hyperparathyroidism.

58. The method of claim 10, which is used for:

a) differentiating between a person having substantially normal parathyroid function and having hyperparathyroidism;

b) monitoring parathyroid related bone disease and treatment;

c) monitoring effects of therapeutic treatment for hyperparathyroidism; or

d) diagnosing parathyroid related bone disease.

59. A kit for measuring a physiological level of whole parathyroid hormone in a mammalian sample, which kit comprises, in a container, an isolated antibody that specifically binds to an N-terminal sequence of whole parathyroid hormone (PTH) and is capable of detecting said whole PTH at a physiological level in a mammalian sample, with a proviso that said isolated antibody avoids binding to a non-whole PTH fragment.

60. An isolated parathyroid hormone (PTH) peptide, which is selected from the group consisting of $PTH_{1-11}$, $PTH_{1-13}$, $PTH_{1-14}$, $PTH_{1-15}$, $PTH_{1-16}$, $PTH_{1-17}$, $PTH_{1-18}$, $PTH_{1-19}$, $PTH_{1-20}$, $PTH_{1-21}$, $PTH_{1-22}$, $PTH_{1-23}$, $PTH_{1-24}$, $PTH_{1-25}$, $PTH_{1-26}$, $hPTH_{1-27}$, $PTH_{1-28}$, $PTH_{1-29}$, $PTH_{1-30}$, $PTH_{1-31}$, $PTH_{1-32}$, $PTH_{1-33}$, $PTH_{1-34}$, $PTH_{1-35}$, $PTH_{1-36}$, $PTH_{2-5}$, $PTH_{2-6}$, $PTH_{2-8}$, $PTH_{2-9}$, $PTH_{2-10}$, $PTH_{2-11}$, $PTH_{2-12}$, $PTH_{2-13}$, $PTH_{2-14}$, $PTH_{2-15}$, $PTH_{2-16}$, $PTH_{2-17}$, $PTH_{2-18}$, $PTH_{2-19}$, $PTH_{2-20}$, $PTH_{2-21}$, $PTH_{2-22}$, $PTH_{2-23}$, $PTH_{2-24}$, $PTH_{2-25}$, $PTH_{2-26}$, $PTH_{2-27}$, $PTH_{2-28}$, $PTH_{2-29}$, $PTH_{2-30}$, $PTH_{2-31}$, $PTH_{2-32}$, $PTH_{2-33}$, $PTH_{2-34}$, $PTH_{2-35}$, $PTH_{2-36}$, $PTH_{3-6}$, $PTH_{3-7}$, $PTH_{3-9}$, $PTH_{3-10}$, $PTH_{3-11}$, $PTH_{3-12}$, $PTH_{3-13}$, $PTH_{3-14}$, $PTH_{3-15}$, $PTH_{3-16}$, $PTH_{3-17}$, $PTH_{3-18}$, $PTH_{3-19}$, $PTH_{3-20}$, $PTH_{3-21}$, $PTH_{3-22}$, $PTH_{3-23}$, $PTH_{3-24}$, $PTH_{3-25}$, $PTH_{3-26}$, $PTH_{3-27}$, $PTH_{3-28}$, $PTH_{3-29}$, $PTH_{3-30}$, $PTH_{3-31}$, $PTH_{3-32}$, $PTH_{3-33}$, $PTH_{3-34}$, $PTH_{3-35}$, $PTH_{3-36}$, $PTH_{4-7}$, $PTH_{4-8}$, $PTH_{4-9}$, $PTH_{4-10}$, $PTH_{4-11}$, $PTH_{4-13}$, $PTH_{4-14}$, $PTH_{4-15}$, $PTH_{4-16}$, $PTH_{4-17}$, $PTH_{4-18}$, $PTH_{4-19}$, $PTH_{4-20}$, $PTH_{4-21}$, $PTH_{4-22}$, $PTH_{4-23}$, $PTH_{4-24}$, $PTH_{4-25}$, $PTH_{4-26}$, $PTH_{4-27}$, $PTH_{4-28}$, $PTH_{4-29}$, $PTH_{4-30}$, $PTH_{4-31}$, $PTH_{4-32}$, $PTH_{4-33}$, $PTH_{4-34}$, $PTH_{4-35}$, $PTH_{4-36}$, $PTH_{5-8}$, $PTH_{5-9}$, $PTH_{5-11}$, $PTH_{5-12}$, $PTH_{5-13}$, $PTH_{5-14}$, $PTH_{5-15}$, $PTH_{5-16}$, $PTH_{5-17}$, $PTH_{5-18}$, $PTH_{5-19}$, $PTH_{5-20}$, $PTH_{5-21}$, $PTH_{5-22}$, $PTH_{5-23}$, $PTH_{5-24}$, $PTH_{5-25}$, $PTH_{5-26}$, $PTH_{5-27}$, $PTH_{5-28}$, $PTH_{5-29}$, $PTH_{5-30}$, $PTH_{5-31}$, $PTH_{5-32}$, $PTH_{5-33}$, $PTH_{5-34}$, $PTH_{5-35}$, $PTH_{5-36}$, and $PTH_{5-37}$.

61. The isolated PTH peptide of claim 60, which is conjugated to a carrier to enhance the PTH peptide's immunogenecity.

62. The isolated PTH peptide of claim 61, wherein the carrier is a carrier protein.

63. The isolated PTH peptide of claim 62, wherein the PTH peptide and the carrier protein are parts of a fusion protein.

64. An immunogen, which immunogen comprises:

a) a PTH peptide of claim 60; and

b) an immune response potentiator.

65. The immunogen of claim 64, wherein the immune response potentiator is selected from the group consisting of Bacille Calmette-Guerin (BCG), Corynebacterium Parvum, Brucella abortus extract, glucan, levamisole, tilorone, an enzyme and a non-virulent virus.

66. A multiple antigenic peptide (MAP), which MAP comprises a branched oligolysine core conjugated with a plurality of the PTH peptide of claim 60.

67. The MAP of claim 66, wherein the branched oligolysine core comprises 3, 7 or 15 lysine residues.

68. The MAP of claim 66, wherein the plurality of the PTH peptide is conjugated to the branched oligolysine core via a spacer.

69. The MAP of claim 68, wherein the spacer is an amino acid residue.

70. The MAP of claim 68, which comprises 4, 8 or 16 copies of the PTH peptide.

71. The MAP of claim 66, wherein the plurality of the PTH peptide comprises same or different PTH peptides.

72. A method for producing an antibody to a parathyroid hormone (PTH) or a PTH peptide, which method comprises:

a) introducing an isolated PTH peptide of claim 60 to a mammal in an amount sufficient to produce an antibody to said PTH peptide; and

b) recovering said antibody from said mammal.

73. An antibody to a PTH or a PTH peptide produced by the method of claim 72.

74. A kit for producing an antibody to a parathyroid hormone (PTH) or a PTH peptide, which kit comprises:

a) an isolated PTH peptide of claim 60;

b) means for introducing said isolated PTH peptide to a mammal in an amount sufficient to produce an antibody to said PTH peptide; and

c) means for recovering said antibody from said mammal.

75. A method for producing an antibody to a parathyroid hormone (PTH) or a PTH peptide, which method comprises:

a) introducing a MAP of claim 66 to a mammal in an amount sufficient to produce an antibody to a PTH peptide comprised in said MAP; and

b) recovering said antibody from said mammal.

76. An antibody to a PTH or a PTH peptide produced by the method of claim 75.

77. A kit for producing an antibody to a parathyroid hormone (PTH) or a PTH peptide, which kit comprises:

a) a MAP of claim 66;

b) means for introducing said MAP to a mammal in an amount sufficient to produce an antibody to a PTH peptide comprised in said MAP; and

c) means for recovering said antibody from said mammal.

78. A method for producing an antibody to a parathyroid hormone (PTH) or a PTH peptide, which method comprises:

a) introducing a PTH protein or peptide from between $PTH_{1-34}$ and $PTH_{1-84}$ to a mammal in an amount sufficient to produce an antibody to said PTH protein or peptide;

b) recovering said antibody from said mammal; and

c) affinity purifying a PTH antibody that specifically binds to an epitope comprised in a PTH peptide of claim 60 using said PTH peptide.

79. An antibody to a PTH or a PTH peptide produced by the method of claim 78.

80. A kit for producing an antibody to a parathyroid hormone (PTH) or a PTH peptide, which kit comprises:

a) a PTH protein or peptide from between $PTH_{1-34}$ and $PTH_{1-84}$;

b) means for introducing said PTH protein or peptide from between $PTH_{1-34}$ and $PTH_{1-84}$ to a mammal in an amount sufficient to produce an antibody to said PTH protein or peptide;

c) means for recovering said antibody from said mammal; and

d) a PTH peptide of claim 60.

81. The method of claim 10, wherein the physiological level of whole parathyroid hormone is from about 7 pgm/ml to about 39 pgm/ml.